RESEARCH, DEVELOPMENT & TECHNOLOGY TRANSFER
QUARTERLY PROGRESS REPORT

Wisconsin Department of Transportation
DT1241 02/2011

INSTRUCTIONS:
Research project investigators and/or project managers should complete a quarterly progress report (QPR) for each calendar quarter during which the projects are active.

WisDOT research program category: ☐ Policy research ☒ Wisconsin Highway Research Program ☐ Other ☐ Pooled fund TPF#		Report period year: 2013 ☐ Quarter 1 (Jan 1 – Mar 31) ☐ Quarter 2 (Apr 1 – Jun 30) ☒ Quarter 3 (Jul 1 – Sep 30) ☐ Quarter 4 (Oct 1 – Dec 31)
Project title: Development and Implementation of the Next Generation Bridge Management System for Wisconsin - Phase 1		
Project investigator: Jose L. ALdayuz, PE	Phone: 703-317-6522	E-mail: jaldayuz@mbakercorp.com
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WisDOT contact: Travis Mc Daniel	Phone: 608-266-5097	E-mail: Travis.McDaniel@dot.wi.gov
WisDOT project ID: 0092-13-06	Other project ID:	Project start date: 5/20/2013
Original end date: 3/21/2015	Current end date: 3/21/2015	Number of extensions: 0

Project schedule status:
☐ On schedule ☐ On revised schedule ☒ Ahead of schedule ☐ Behind schedule

Project budget status:

Total Project Budget	Expenditures Current Quarter	Total Expenditures	% Funds Expended	% Work Completed
$99,997.17	$44,236.85	$60,236.40	60%	61%

Regular Compensated

Project description: The objective of this research is to collect and derive Wisconsin specific data for the next generation BMS as well as to test the effectiveness and accuracy of this data on a subset of WisDOT bridges. The Baker team will use a subset of 10 state-owned bridges from each of the 5 WisDOT Regions for a total of 50 bridges.

Progress this quarter (includes meetings, work plan status, contract status, significant progress, etc.):

Task 1: Literature Review – 100% Complete

The kickoff meeting was held WisDOT on May 2013

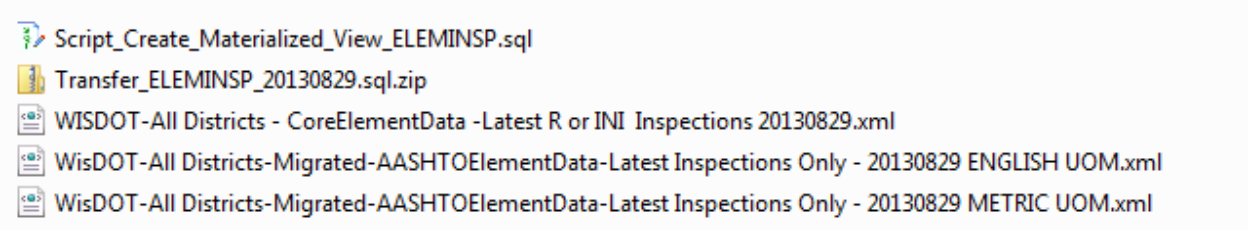
The literature review was completed and the tablet shown below will be part of an appendix of the Final Report to be delivered on Tasks 3 and 8.

Title	Author	Date	Source/URL
AASHTO Manual for Bridge Element Inspection	AASHTO	June, 2013	AASHTO
Pontis 5.1.4 Database Design Changes	Bentley and Allen Marshall	June, 2013	AASHTO
Pontis 5.1.3 Release Notes	Bentley	May,2013	AASHTO
HSI Schema	WisDOT	December, 2012	Wisconsin DOT
Development of Element Repair Costs and Estimated Life Expectancy for Bridge Maintenance	CTC & Associates	October,2011	http://wisdotresearch.wi.gov/wp-content/uploads/tlselementrepaircosts-10-7-11_revised-2.pdf
AASHTO Guide Manual for Bridge Element Inspection	AASHTO	January,2011	AASHTO
Pontis 5.2 Design Document	Michael Baker Jr., Inc. and Paul Thompson	August, 2010	AASHTO
Sensitivity Analysis of Bridge Health Index to Element Failure Costs and Conditions	Teresa M. Adams and Myungook Kang	November,2009	Midwest Regional Transportation Center - UW Madison
Element Unit and Failure Costs and Functional Improvement Costs for Use in the MN/DOT Pontis Bridge Management System	Teresa M. Adams and Emil Juni	November,2003	Minnessota DOT
Bridge Life-Cycle Cost Analysis	Hugh Hawk	June, 2003	NCHRP REPORT 483
WisDOT Bridge Inspection Pocket Manual	WisDOT	February,2002	Wisconsin DOT
Establishing MR&R Costs for a Network-Level Bridge Management System	Teresa M. Adams and Joseph F. Barut	January, 1998	TRANSPORTATION RESEARCH RECORD 1642
Sensitivity of Network-Level BMS MR&R Policies to Variations in Cost, Transition Probability, and Discount Factor	Teresa M. Adams and P. Robert Sianapar	January, 1998	TRANSPORTATION RESEARCH RECORD 1643

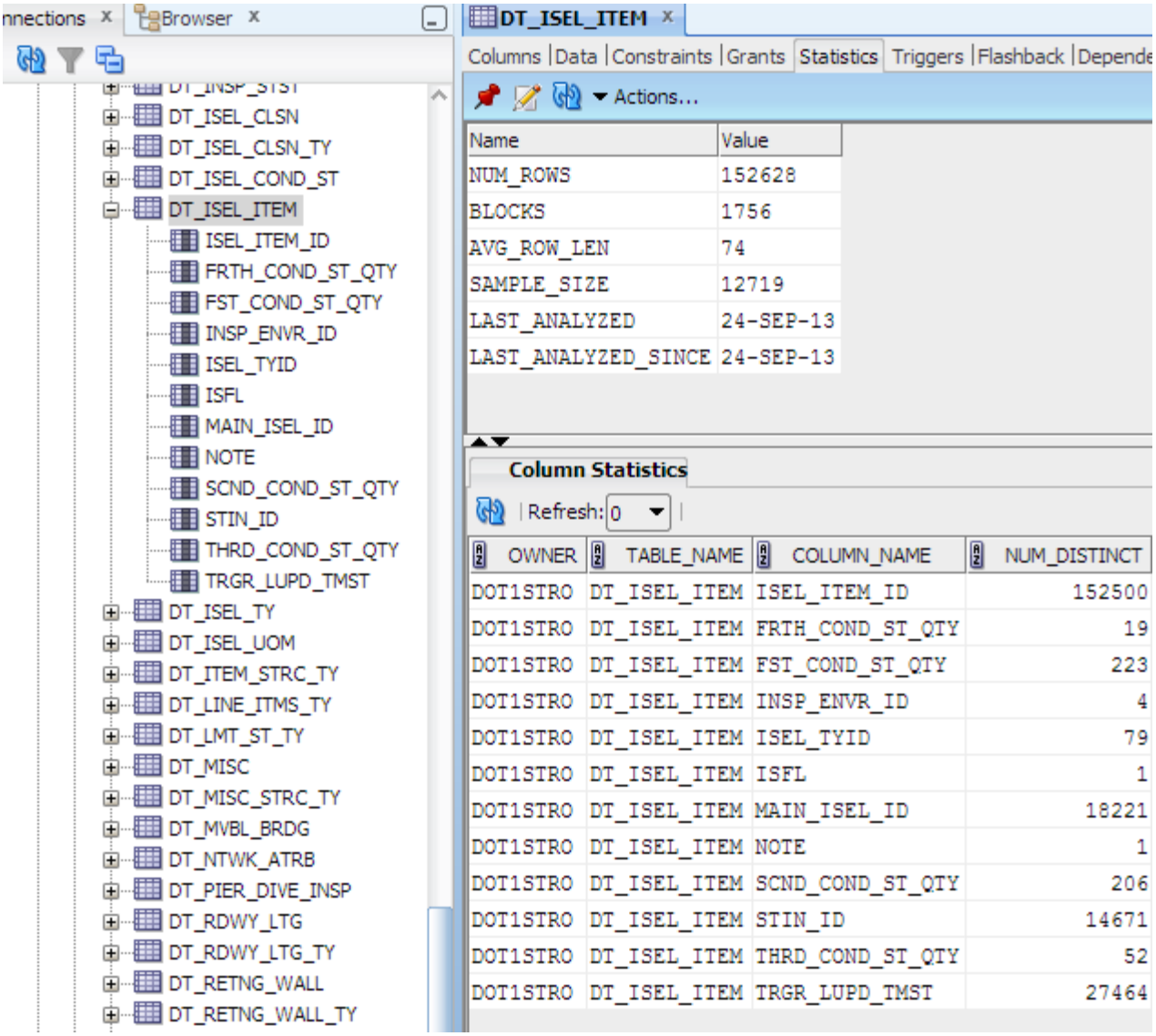
Task 2: Database Development – 90% Complete

During the period from July 1, 2013 through Sep 30, 2013 the team completed the development of the migration rules for all the elements in the HSI Database, as well as migration of the inspection information for all the bridges in the database instead of just 50 bridges specified in the work plan.

The following files were delivered to WisDOT via ftp on August 29, 2013



The team has also developed a migration tool to import the translated element information shown above into a revised and future version of the HSI database. As of the writing of this report, we have successfully imported the XML file information into our test HSI database. As previously done during the migration stage, the information containing the last inspection information for all bridges in the database was imported.



Task 3: Work Plan Development and Interim Report – 10% Complete

The team has provided initial documentation at the second meeting held on August 13 and have continued documenting the database development to produce an interim report and Work Plan for Phase II

Task 4: State-Specific Customization– 0% Complete

Task 5: User Manual – 0% Complete

Task 6: Bridge Management System Pilot – 0% Complete

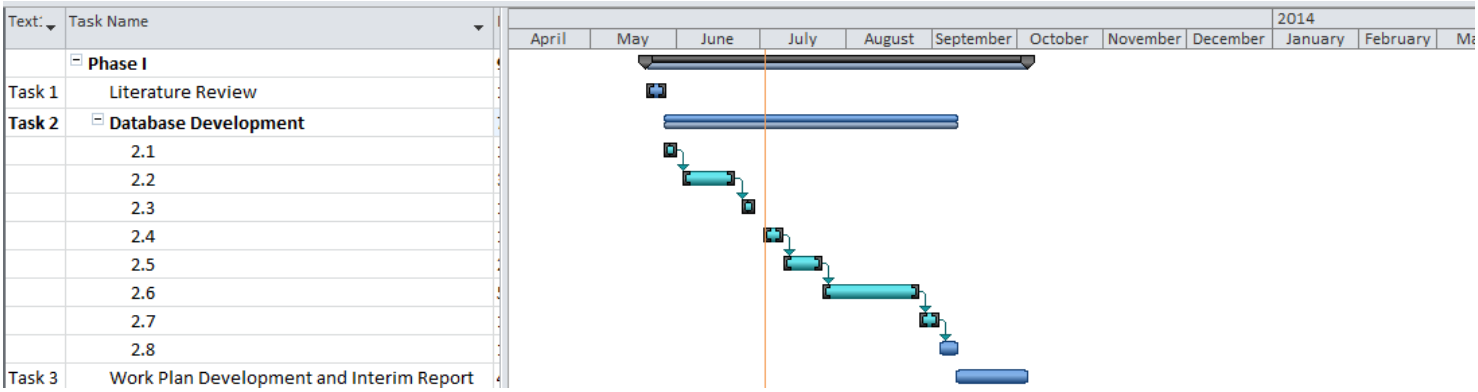
Task 7: Implementation Plan – 0% Complete

Task 8: Project Deliverables – 0% Complete

Anticipated work next quarter:
We anticipate finishing Task 3 of Phase I

Circumstances affecting project or budget:
None

Attach / insert Gantt chart and other project documentation



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Staff receiving QPR: K. Dinkins	Date received: 09/30/2013
Staff approving QPR:	Date approved: